Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Claim 1 (original): An electromagnetic radiation diffuser comprising:

a substrate having a first and a second surface, said first surface having a structure with a three dimensional profile of individual grid units;

a reflective coating formed on said first surface, wherein said reflective coating conforms to said structure; and

an absorptive grating formed on said reflective coating, said absorptive grating including spaces;

wherein said absorptive grating absorbs a first portion of the electromagnetic radiation, while a second portion of the electromagnetic radiation passing through said spaces is diffusely reflected by said reflective coating.

Claim 2 (original): The apparatus of claim 1, wherein said individual grid units have randomly selected heights over a predetermined range.

Claim 3 (original): The apparatus of claim 2, wherein said predetermined range is approximately 50 nanometers.

Claim 4 (original): The apparatus of claim 2, wherein said individual grid units each have an area of approximately 100 nanometers by 100 nanometers.

Claim 5 (original): The apparatus of claim 2, wherein said absorptive grating is oriented diagonally across said individual grid units.

Claim 6 (original): The apparatus of claim 5, wherein said absorptive grating is approximately 3.2 microns wide and repeats approximately every 6.4 microns.

Claim 7 (original): An electromagnetic radiation diffuser comprising:

a substrate having a first and a second surface, said first surface having a structure with a three dimensional profile of individual grid units;

a reflective coating formed on said first surface that conforms to said structure and diffusely reflects extreme ultraviolet radiation; and

an absorptive grating formed over said reflective coating wherein said absorptive grating absorbs a first portion of the electromagnetic radiation, while a second portion of the electromagnetic radiation passing through spaces between said absorptive grating is diffusely reflected by said reflective coating.

Claim 8 (currently amended): The ~~diffuser~~ apparatus of ~~claim 7~~ claim 7, wherein said individual grid units have randomly selected heights over a predetermined range.

Claim 9 (original): The apparatus of claim 8, wherein said predetermined range is approximately 50 nanometers.

Claim 10 (original): The apparatus of claim 8, wherein said individual grid units are approximately 100 nanometers by 100 nanometers.

Claim 11 (original): The apparatus of claim 7, wherein said absorptive grating is oriented diagonally across said individual grid units.

Claim 12 (original): The apparatus of claim 7, wherein said absorptive grating is approximately 3.2 microns wide and repeats approximately every 6.4 microns.

Claim 13 (original): A method for making an electromagnetic radiation diffuser on a substrate, comprising:

(a) fabricating in a first surface of the substrate a three dimensional profile of individual grid units;

(b) forming a reflective coating over said three dimensional profile that conforms to said three dimensional profile; and

(c) forming an absorptive grating over said reflective coating.

Claim 14 (original): The method of claim 13, further comprising:

randomly selecting heights for said individual grid units; and

fabricating said individual grid units according to said randomly selected heights.

Claim 15 (original): The method of claim 14, wherein said randomly selecting step randomly selects said heights of said individual grid units such that said heights range from 0 to approximately 50nm.

Claim 16 (original): The method of claim 14, comprising fabricating individual grid units that have an area of approximately 100 nanometers by 100 nanometers.

Claim 17 (original): The method of claim 13, further comprising orienting said absorptive grating diagonally across said individual grid units.

Claim 18 (currently amended): The method of claim 13, wherein said forming an absorptive grating step forms an absorptive grating portion approximately 3.2 microns wide over said reflective coating and ~~repeating an~~ repeats said absorptive grating portion approximately every 6.4 microns.

Claim 19 (original): A lithography system comprising:

an electromagnetic radiation source;

an electromagnetic radiation diffuser positioned at a first optical plane, said diffuser having a substrate with a three dimensional profile of individual grid units that are covered by a reflective coating that conforms to said substrate, wherein said reflective coating is further covered by an absorptive grating for absorbing a first portion of said electromagnetic radiation, while a second portion of said electromagnetic radiation passing through spaces between said absorptive grating is diffusely reflected by said reflective coating; and

an electromagnetic radiation sensor positioned at a second optical plane;

wherein electromagnetic radiation incident on said diffuser is diffusely reflected and received at said sensor.

Claim 20 (original): The lithography system of claim 19, wherein said electromagnetic radiation source is an extreme ultraviolet radiation source.

Claim 21 (original): The lithography system of claim 19, wherein said first optical plane is a reticle plane.

Claim 22 (original): The lithography system of claim 19, wherein said second optical plane is a wafer plane.

Claim 23 (currently amended): The lithography system of claim 19, wherein said individual grid units have randomly selected heights over a predetermined range.

Claim 24 (currently amended): The lithography system of claim 23, wherein said predetermined range is approximately 50 nanometers.

Claim 25 (currently amended): The lithography system of claim 23, wherein said individual grid units have an area of approximately 100 nanometers by 100 nanometers.

Claim 26 (currently amended): The ~~apparatus~~ lithography system of claim 19, wherein said absorptive grating is oriented diagonally along said individual grid units.

Claim 27 (currently amended): The ~~apparatus~~ lithography system of ~~claim 19~~ claim 19, wherein said absorptive grating is approximately 3.2 microns wide and repeats approximately every 6.4 microns.

Remarks

This Amendment corrects formal matters in the specification and claims without changing the scope of the claims. Specifically, the specification is amended to correct minor typographical or grammatical errors. Dependent claims 8 and 23-27 are amended to recite their preambles in a consistent manner with their neighboring dependent claims. Claim 18 is amended to correct a verb tense to improve readability. Claim 24 is amended to add the word "approximately" to be in line with similar claims 3 and 9, for example. Support for the amendment to claim 24 can also be found, for example, in paragraph 42 of the originally-filed specification.

None of these amendments adds new matter. Accordingly, Applicants respectfully request that this Amendment be entered.

Other Matters - Formal Replacement Drawings

Submitted herewith are five (5) replacement drawing sheets showing Figures 1, 2, 3A, 3B, 4A, 4B, 5, and 6, corresponding to the respective informal drawings submitted in the present application. Identification of the replacement drawings is provided in accordance with 37 C.F.R. § 1.84(c). Acknowledgment of the receipt, approval, and entry of these replacement drawings into this application is respectfully requested.

In conclusion, reconsideration and entry of this Amendment is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michael V. Messinger
Attorney for Applicants
Registration No. 37,575

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1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

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